OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/945,265

DATE: 09/21/2001
TIME: 20:49:59

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\09212001\I945265.raw

ENTERED

```
 3 <110> APPLICANT: Springer, Timothy A.
 4        Shimaoka, Motomu
 5        Lu, Chafen
 7 <120> TITLE OF INVENTION: MODIFIED POLYPEPTIDES STABILIZED IN A
 8        DESIRED CONFORMATION AND METHODS FOR PRODUCING SAME
10 <130> FILE REFERENCE: CBN-002CP
12 <140> CURRENT APPLICATION NUMBER: US/09/945,265
12 <141> CURRENT FILING DATE: 2001-08-31
12 <150> PRIOR APPLICATION NUMBER: US 60/229,700
13 <151> PRIOR FILING DATE: 2000-09-01
15 <160> NUMBER OF SEQ ID NOS: 4
17 <170> SOFTWARE: FastSEQ for Windows Version 4.0
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 5133
21 <212> TYPE: DNA
22 <213> ORGANISM: Homo sapiens
24 <400> SEQUENCE: 1
25 cctctttcac cctgtctagg ttgccagcaa atcccacggg cctcctgacg ctgcccctgg 60
26 ggccacaggt ccctcgagtg ctggaaggat gaaggattcc tgcatcactg tgatggccat 120
27 ggcgctgctg tctgggttct ttttcttcgc gccggcctcg agctacaacc tggacgtgcg 180
28 gggcgcgcgg agcttctccc caccgcgcgc cgggaggcac tttggatacc gcgtcctgca 240
29 ggtcggaaac ggggtcatcg tgggagctcc aggggagggg aacagcacag gaagcctcta 300
30 tcagtgccag tcgggcacag gacactgcct gccagtcacc ctgagaggtt ccaactatac 360
31 ctccaagtac ttgggaatga ccttggcaac agaccccaca gatggaagca tttggcctg 420
32 tgaccctggg ctgtctcgaa cgtgtgacca gaacacctat ctgagtggcc tgtgttacct 480
33 cttccgccag aatctgcagg gtcccatgct gcaggggcgc cctggttttc aggaatgtat 540
34 caagggcaac gtagacctgg tatttctgtt tgatggttcg atgagcttgc agccagatga 600
35 atttcagaaa attctggact tcatgaagga tgtgatgaag aaactcagca cacttcgta 660
36 ccagtttgct gctgttcagt tttccacaag ctacaaaaca gaatttgatt tctcagatta 720
37 tgttaaatgg aaggaccctg atgctctgct gaagcatgta aagcacatgt tgctgttgac 780
38 caataccttt ggtgccatca attatgtcgc gacagaggtg ttccgggagg agctgggggc 840
39 ccggccagat gccaccaaag tgcttatcat catcacggat ggggaggcca ctgacagtgg 900
40 caacatcgat gcggccaaag acatcatccg ctacatcatc gggattggaa agcatttca 960
41 gaccaaggag agtcaggaga ccctccacaa atttgcatca aaacccgcga gcgagtttgt 1020
42 gaaaattctg gacacatttg agaagctgaa agatctattc actgagctgc agaagaagat 1080
43 ctatgtcatt gagggcacaa gcaaacagga cctgacttcc ttcaacatgg agctgtcctc 1140
44 cagcggcatc agtgctgacc tcagcagggg ccatgcagtc gtggggggcag taggagccaa 1200
45 ggactgggct ggggggctttc ttgacctgaa ggcagacctg caggatgaca catttattgg 1260
46 gaatgaacca ttgacaccag aagtgagagc aggctatttg ggttacaccg tgacctggct 1320
47 gccctcccgg caaaagactt cgttgctggc ctcgggagcc cctcgatacc agcacatggg 1380
48 ccgagtgctg ctgttccaag agccacaggg cggaggacac tggagccagg tccagacaat 1440
49 ccatgggacc cagattggct cttatttcgg tggggagctg tgtggcgtcg acgtggacca 1500
50 agatgggga acagagctgc tgctgattgg tgccccactg ttctatgggg agcagagagg 1560
51 aggccgggtg tttatctacc agagaagaca gttggggttt gaagaagtct cagagctgca 1620
52 gggggacccc ggctacccac tcgggcggtt tggagaagcc atcactgctc tgacagacat 1680
53 caacggcgat gggctggtag acgtggctgt ggggggcccct ctggaggagc aggggggctgt 1740
54 gtacatcttc aatgggaggc acgggggggct tagtccccag ccaagtcagc ggatagaagg 1800
```

file://C:\CRF3\Outhold\VsrI945265.htm

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/945,265

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\09212001\I945265.raw

```
 55 gacccaagtg ctctcaggaa ttcagtggtt tggacgctcc atccatgggg tgaaggacct 1860
 56 tgaaggggat ggcttggcag atgtggctgt gggggctgag agccagatga tcgtgctgag 1920
 57 ctcccggccc gtggtggata tggtcaccct gatgtccttc tctccagctg agatcccagt 1980
 58 gcatgaagtg gagtgctcct attcaaccag taacaagatg aaagaaggag ttaatatcac 2040
 59 aatctgtttc cagatcaagt ctctctaccc ccagttccaa ggccgcctgg ttgccaatct 2100
 60 cacttacact ctgcagctgg atggccaccg gaccagaaga cgggggttgt tcccaggagg 2160
 61 gagacatgaa ctcagaagga atatagctgt caccaccagc atgtcatgca ctgacttctc 2220
 62 atttcatttc ccggtatgtg ttcaagacct catctccccc atcaatgttt ccctgaattt 2280
 63 ctctctttgg gaggaggaag ggacaccgag ggaccaaagg gcgcagggca aggacatacc 2340
 64 gcccatcctg agaccctccc tgcactcgga aacctgggag atcccttttg agaagaactg 2400
 65 tggggaggac aagaagtgtg aggcaaactt gagagtgtcc ttctctcctg caagatccag 2460
 66 agccctgcgt ctaactgctt ttgccagcct ctctgtggag ctgagcctga gtaacttgga 2520
 67 agaagatgct tactgggtcc agctggacct gcacttcccc ccgggactct ccttccgcaa 2580
 68 ggtggagatg ctgaagcccc atagccagat acctgtgagc tgcgaggagc ttcctgaaga 2640
 69 gtccaggctt ctgtccaggg cattatcttg caatgtgagc tctcccatct tcaaagcagg 2700
 70 ccactcggtt gctctgcaga tgatgtttaa tacactggta aacagctcct gggggggactc 2760
 71 ggttgaattg cacgccaatg tgacctgtaa caatgaggac tcagacctcc tggaggacaa 2820
 72 ctcagccact accatcatcc ccatcctgta ccccatcaac atcctcatcc aggaccaaga 2880
 73 agactccaca ctctatgtca gtttcacccc caaaggcccc aagatccacc aagtcaagca 2940
 74 catgtaccag gtgaggatcc agccttccat ccacgaccac aacatacccca ccctggaggc 3000
 75 tgtggttggg gtgccacagc ctcccagcga ggggcccatc acacaccagt ggagcgtgca 3060
 76 gatggagcct cccgtgccct gccactatga ggatctggag aggctcccgg atgcagctga 3120
 77 gccttgtctc cccggagccc tgttccgctg ccctgttgtc ttcaggcagg agatcctcgt 3180
 78 ccaagtgatc gggactctgg agctggtggg agagatcgag gcctcttcca tgttcagcct 3240
 79 ctgcagctcc ctctccatct ccttcaacag cagcaagcat ttccacctct atggcagcaa 3300
 80 cgcctccctg gcccaggttg tcatgaaggt tgacgtggtg tatgagaagc agatgctcta 3360
 81 cctctacgtg ctgagcggca tcggggggct gctgctgctg ctgctcattt tcatagtgct 3420
 82 gtacaaggtt ggtttcttca aacggaacct gaaggagaag atggaggctg gcagaggtgt 3480
 83 cccgaatgga atccctgcag aagactctga gcagctggca tctgggcaag aggctgggga 3540
 84 tcccggctgc ctgaagcccc tccatgagaa ggactctgag agtggtggtg gcaaggactg 3600
 85 agtccaggcc tgtgaggtgc agagtgccca gaactggact caggatgccc agggccactc 3660
 86 tgcctctgcc tgcattctgc cgtgtgccct cgggcgagtc actgcctctc cctggccctc 3720
 87 agtttcccta tctcgaacat ggaactcatt cctgaatgtc tcctttgcag gctcataggg 3780
 88 aagacctgct gagggaccag ccaagagggc tgcaaaagtg agggcttgtc attaccagac 3840
 89 ggttcaccag cctctcttgg ttccttcctt ggaagagaat gtctgatcta aatgtggaga 3900
 90 aactgtagtc tcaggaccta gggatgttct ggccctcacc cctgccctgg gatgtccaca 3960
 91 gatgcctcca ccccccagaa cctgtccttg cacactcccc tgcactggag tccagtctct 4020
 92 tctgctggca gaaagcaaat gtgacctgtg tcactacgtg actgtggcac acgccttgtt 4080
 93 cttggccaaa gaccaaattc cttggcatgc cttccagcac cctgcaaaat gagaccctcg 4140
 94 tggccttccc cagcctcttc tagagccgtg atgcctccct gttgaagctc tggtgacacc 4200
 95 agcctttctc ccaggccagg ctccttcctg tcttcctgca ttcacccaga cagctccctc 4260
 96 tgcctgaacc ttccatctcg cccacccctc cttccttgac cagcagatcc cagctcacgt 4320
 97 cacacacttg gttgggtcct cacatctttc acacttccac caccctgcac tactccctca 4380
 98 aagcacacgt catgtttctt catccggcag cctggatgtt ttttccctgt ttaatgattg 4440
 99 acgtacttag cagctatctc tcagtgaact gtgagggtaa aggctatact tgtcttgttc 4500
100 accttgggat gacgccgcat gatatgtcag ggcgtgggac atctagtagg tgcttgacat 4560
101 aatttcactg aattaatgac agagccagtg ggaagataca gaaaaagagg gccggggctg 4620
102 ggcgcggtgg ttcacgcctg taatcccagc actttgggag gccaggagg gtggatcacc 4680
103 tgaggtcagg agttagaggc cagcctggcg aaaccccatc tctactaaaa atacaaaatc 4740
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/945,265

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\09212001\I945265.raw

```
104 caggcgtggt ggcacacacc tgtagtccca gctactcagg aggttgaggt aggagaattg 4800
105 cttgaacctg ggaggtggag gttgcagtga gccaagattg cgccattgca ctccagcctg 4860
106 ggcaacacag cgagactccg tctcaaggaa aaaataaaaa taaaaagcgg gcacgggccc 4920
107 ggacatcccc acccttggag gctgtcttct caggctctgc cctgccctag ctccacaccc 4980
108 tctcccagga cccatcacgc ctgtgcagtg gcccccacag aaagactgag ctcaaggtgg 5040
109 gaaccacgtc tgctaacttg gagccccagt gccaagcaca gtgcctgcat gtatttatcc 5100
110 aataaatgtg aaattctgtc caaaaaaaaa aaa                                5133
```

112 <210> SEQ ID NO: 2
113 <211> LENGTH: 1170
114 <212> TYPE: PRT
115 <213> ORGANISM: Homo sapiens

117 <400> SEQUENCE: 2
118 Met Lys Asp Ser Cys Ile Thr Val Met Ala Met Ala Leu Leu Ser Gly
119   1   5   10   15
120 Phe Phe Phe Phe Ala Pro Ala Ser Ser Tyr Asn Leu Asp Val Arg Gly
121   20   25   30
122 Ala Arg Ser Phe Ser Pro Pro Arg Ala Gly Arg His Phe Gly Tyr Arg
123   35   40   45
124 Val Leu Gln Val Gly Asn Gly Val Ile Val Gly Ala Pro Gly Glu Gly
125   50   55   60
126 Asn Ser Thr Gly Ser Leu Tyr Gln Cys Gln Ser Gly Thr Gly His Cys
127 65   70   75   80
128 Leu Pro Val Thr Leu Arg Gly Ser Asn Tyr Thr Ser Lys Tyr Leu Gly
129   85   90   95
130 Met Thr Leu Ala Thr Asp Pro Thr Asp Gly Ser Ile Leu Ala Cys Asp
131   100   105   110
132 Pro Gly Leu Ser Arg Thr Cys Asp Gln Asn Thr Tyr Leu Ser Gly Leu
133   115   120   125
134 Cys Tyr Leu Phe Arg Gln Asn Leu Gln Gly Pro Met Leu Gln Gly Arg
135   130   135   140
136 Pro Gly Phe Gln Glu Cys Ile Lys Gly Asn Val Asp Leu Val Phe Leu
137 145   150   155   160
138 Phe Asp Gly Ser Met Ser Leu Gln Pro Asp Glu Phe Gln Lys Ile Leu
139   165   170   175
140 Asp Phe Met Lys Asp Val Met Lys Lys Leu Ser Asn Thr Ser Tyr Gln
141   180   185   190
142 Phe Ala Ala Val Gln Phe Ser Thr Ser Tyr Lys Thr Glu Phe Asp Phe
143   195   200   205
144 Ser Asp Tyr Val Lys Arg Lys Asp Pro Asp Ala Leu Leu Lys His Val
145 210   215   220
146 Lys His Met Leu Leu Leu Thr Asn Thr Phe Gly Ala Ile Asn Tyr Val
147 225   230   235   240
148 Ala Thr Glu Val Phe Arg Glu Glu Leu Gly Ala Arg Pro Asp Ala Thr
149   245   250   255
150 Lys Val Leu Ile Ile Ile Thr Asp Gly Glu Ala Thr Asp Ser Gly Asn
151   260   265   270
152 Ile Asp Ala Ala Lys Asp Ile Ile Arg Tyr Ile Ile Gly Ile Gly Lys
153   275   280   285
154 His Phe Gln Thr Lys Glu Ser Gln Glu Thr Leu His Lys Phe Ala Ser
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/945,265

DATE: 09/21/2001
TIME: 20:49:59

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\09212001\I945265.raw

```
155       290                      295                   300
156 Lys Pro Ala Ser Glu Phe Val Lys Ile Leu Asp Thr Phe Glu Lys Leu
157 305                      310                   315                   320
158 Lys Asp Leu Phe Thr Glu Leu Gln Lys Lys Ile Tyr Val Ile Glu Gly
159                          325                   330                   335
160 Thr Ser Lys Gln Asp Leu Thr Ser Phe Asn Met Glu Leu Ser Ser Ser
161          340                               345                   350
162 Gly Ile Ser Ala Asp Leu Ser Arg Gly His Ala Val Val Gly Ala Val
163          355                      360                   365
164 Gly Ala Lys Asp Trp Ala Gly Gly Phe Leu Asp Leu Lys Ala Asp Leu
165       370                      375                   380
166 Gln Asp Asp Thr Phe Ile Gly Asn Glu Pro Leu Thr Pro Glu Val Arg
167 385                      390                   395                   400
168 Ala Gly Tyr Leu Gly Tyr Thr Val Thr Trp Leu Pro Ser Arg Gln Lys
169                          405                   410                   415
170 Thr Ser Leu Leu Ala Ser Gly Ala Pro Arg Tyr Gln His Met Gly Arg
171          420                      425                   430
172 Val Leu Leu Phe Gln Glu Pro Gln Gly Gly Gly His Trp Ser Gln Val
173          435                      440                   445
174 Gln Thr Ile His Gly Thr Gln Ile Gly Ser Tyr Phe Gly Gly Glu Leu
175       450                      455                   460
176 Cys Gly Val Asp Val Asp Gln Asp Gly Glu Thr Glu Leu Leu Leu Ile
177 465                      470                   475                   480
178 Gly Ala Pro Leu Phe Tyr Gly Glu Gln Arg Gly Gly Arg Val Phe Ile
179                          485                   490                   495
180 Tyr Gln Arg Arg Gln Leu Gly Phe Glu Glu Val Ser Glu Leu Gln Gly
181          500                      505                   510
182 Asp Pro Gly Tyr Pro Leu Gly Arg Phe Gly Glu Ala Ile Thr Ala Leu
183          515                      520                   525
184 Thr Asp Ile Asn Gly Asp Gly Leu Val Asp Val Ala Val Gly Ala Pro
185       530                      535                   540
186 Leu Glu Glu Gln Gly Ala Val Tyr Ile Phe Asn Gly Arg His Gly Gly
187 545                      550                   555                   560
188 Leu Ser Pro Gln Pro Ser Gln Arg Ile Glu Gly Thr Gln Val Leu Ser
189                          565                   570                   575
190 Gly Ile Gln Trp Phe Gly Arg Ser Ile His Gly Val Lys Asp Leu Glu
191          580                      585                   590
192 Gly Asp Gly Leu Ala Asp Val Ala Val Gly Ala Glu Ser Gln Met Ile
193          595                      600                   605
194 Val Leu Ser Ser Arg Pro Val Val Asp Met Val Thr Leu Met Ser Phe
195       610                      615                   620
196 Ser Pro Ala Glu Ile Pro Val His Glu Val Glu Cys Ser Tyr Ser Thr
197 625                      630                   635                   640
198 Ser Asn Lys Met Lys Glu Gly Val Asn Ile Thr Ile Cys Phe Gln Ile
199          645                      650                   655
200 Lys Ser Leu Tyr Pro Gln Phe Gln Gly Arg Leu Val Ala Asn Leu Thr
201          660                      665                   670
202 Tyr Thr Leu Gln Leu Asp Gly His Arg Thr Arg Arg Arg Gly Leu Phe
203          675                      680                   685
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/945,265

DATE: 09/21/2001
TIME: 20:49:59

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\09212001\I945265.raw

```
                                                  Val Thr Thr Ser
204 Pro Gly Gly Arg His Glu Leu Arg Arg Asn Ile Ala    700
205      690              695                Val Cys Val Gln Asp
206 Met Ser Cys Thr Asp Phe Ser Phe His Phe Pro    715          720
207 705              710                Ser Leu Trp Glu Glu
208 Leu Ile Ser Pro Ile Asn Val Ser Leu Asn Phe    735
209      725              730           Asp Ile Pro Pro
210 Glu Gly Thr Pro Arg Asp Gln Arg Ala Gln Gly Lys    750
211      740              745           Ile Pro Phe Glu
212 Ile Leu Arg Pro Ser Leu His Ser Glu Thr Trp Glu    765
213      755              760
214 Lys Asn Cys Gly Glu Asp Lys Lys Cys Glu Ala Asn Leu Arg Val Ser
215      770              775                780
216 Phe Ser Pro Ala Arg Ser Arg Ala Leu Arg Leu Thr Ala Phe Ala Ser
217 785              790                795                800
218 Leu Ser Val Glu Leu Ser Leu Ser Asn Leu Glu Glu Asp Ala Tyr Trp
219              805              810                815
220 Val Gln Leu Asp Leu His Phe Pro Pro Gly Leu Ser Phe Arg Lys Val
221      820              825                830
222 Glu Met Leu Lys Pro His Ser Gln Ile Pro Val Ser Cys Glu Glu Leu
223      835              840                845
224 Pro Glu Glu Ser Arg Leu Leu Ser Arg Ala Leu Ser Cys Asn Val Ser
225      850              855                860
226 Ser Pro Ile Phe Lys Ala Gly His Ser Val Ala Leu Gln Met Met Phe
227 865              870                875                880
228 Asn Thr Leu Val Asn Ser Ser Trp Gly Asp Ser Val Glu Leu His Ala
229              885              890                895
230 Asn Val Thr Cys Asn Asn Glu Asp Ser Asp Leu Leu Glu Asp Asn Ser
231              900              905                910
232 Ala Thr Thr Ile Ile Pro Ile Leu Tyr Pro Ile Asn Ile Leu Ile Gln
233      915              920                925
234 Asp Gln Glu Asp Ser Thr Leu Tyr Val Ser Phe Thr Pro Lys Gly Pro
235      930              935                940
236 Lys Ile His Gln Val Lys His Met Tyr Gln Val Arg Ile Gln Pro Ser
237 945              950                955                960
238 Ile His Asp His Asn Ile Pro Thr Leu Glu Ala Val Val Gly Val Pro
239              965              970                975
240 Gln Pro Pro Ser Glu Gly Pro Ile Thr His Gln Trp Ser Val Gln Met
241      980              985                990
242 Glu Pro Pro Val Pro Cys His Tyr Glu Asp Leu Glu Arg Leu Pro Asp
243      995              1000               1005
244 Ala Ala Glu Pro Cys Leu Pro Gly Ala Leu Phe Arg Cys Pro Val Val
245      1010             1015               1020
246 Phe Arg Gln Glu Ile Leu Val Gln Val Ile Gly Thr Leu Glu Leu Val
247 1025             1030               1035               1040
248 Gly Glu Ile Glu Ala Ser Ser Met Phe Ser Leu Cys Ser Ser Leu Ser
249              1045             1050               1055
250 Ile Ser Phe Asn Ser Ser Lys His Phe His Leu Tyr Gly Ser Asn Ala
251              1060             1065               1070
252 Ser Leu Ala Gln Val Val Met Lys Val Asp Val Val Tyr Glu Lys Gln
```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/945,265

DATE: 09/21/2001
TIME: 20:50:00

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\09212001\I945265.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date